

[HIGH-VOLTAGE MOS DEVICE AND FAB- RICATION THEREOF]

Abstract

A HV-MOS device is described, including a substrate, a gate dielectric layer and a gate, a channel region, two doped regions as a source and a drain, a field isolation layer between the gate and at least one of the two doped regions, a drift region and a modifying doped region. The drift region is located in the substrate under the field isolation layer and connects with the channel region and the at least one doped region. The modifying doped region is at the periphery of the at least one doped region.